

AMENDMENTS

IN THE SPECIFICATION:

Please replace paragraph [0024] on page 8, with the following rewritten paragraph:

[0024] A quadruplex nucleic acid or a test nucleic acid utilized in the assays described herein sometimes includes a nucleotide sequence that is similar to a native nucleotide sequence in genomic DNA. A similar nucleotide sequence may include modifications to the native sequence, such as substitutions, deletions, or insertions of one or more nucleotides. A quadruplex nucleic acid or a test nucleic acid may include a nucleotide sequence that conforms to the motif (GGA)₄ (SEQ ID NO:32) or (GGA)₃GG (SEQ ID NO:38) where G is guanine and A is adenine. Also, a quadruplex nucleic acid or a test nucleic acid may include a nucleotide sequence that conforms to the motif (G_aX_b)_cG_a, where G is guanine; X is guanine, cytosine, adenine, or thymine; a is an integer between 2 to 10; b is an integer between 1 to 6; and c is the integer 3. Sometimes a is an integer between 2 and 6 and b is an integer between 1 and 4, and often, b is the integer 2 or 3. A quadruplex nucleic acid or a test nucleic acid may include one or more flanking nucleotides on the 5' and/or 3' end of the nucleotide sequence that forms the quadruplex that are not part of the quadruplex structure.

Please replace paragraph [0071] on page 24, with the following rewritten paragraph:

[0071] An example of the Taq polymerase stop assay is described in Han *et al.*, *Nucl. Acids Res.* 27: 537-542 (1999), which is a modification of that used by Weitzmann *et al.*, *J. Biol. Chem.* 271, 20958–20964 (1996). Briefly, a reaction mixture of template DNA (50 nM), Tris·HCl (50 mM), MgCl₂ (10 mM), DTT (0.5 mM), EDTA (0.1 mM), BSA (60 ng), and 5'-end-labeled quadruplex nucleic acid (~18 nM) is heated to 90°C for 5 minutes and allowed to cool to ambient temperature over 30 minutes. Taq Polymerase (1 µl) is added to the reaction mixture, and the reaction is maintained at a constant temperature for 30 minutes. Following the addition of 10 µl stop buffer (formamide (20 ml), 1 M NaOH (200 µl), 0.5 M

EDTA (400 µl), and 10 mg bromophenol blue), the reactions are separated on a preparative gel (12%) and visualized on a phosphorimager. Adenine sequencing (indicated by “A” at the top of the gel) is performed using double-stranded DNA Cycle Sequencing System from Life Technologies. The general sequence for the template strands is TCCAACATGTATAC-***INSERT***-TTAGCGACACGCAATTGCTATAGTGAGTCGTATTA (SEQ ID NOS:39-40). Bands on the gel that exhibit slower mobility are indicative of quadruplex formation.